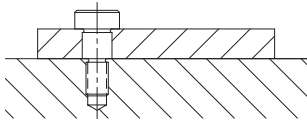


SHOULDER SCREWS

ALLOY STEEL, HEAT TREATED RC 32-43, BLACK OXIDE FINISH



Precision close-tolerance Shoulder Screw. Shoulder diameter is ground to a closer tolerance than ordinary stripper bolts for better bearing action. Shoulder length is held to a plus tolerance to allow a nominal-size plate to rotate freely underneath the head.

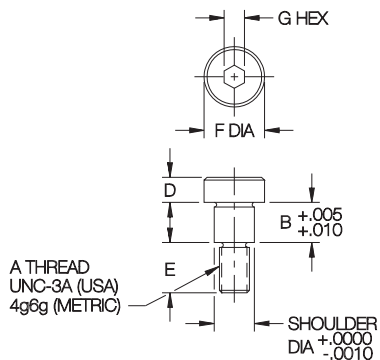


USA

PART NO.	SHOULDER DIA		A	B		D	E	F DIA	G
	NOMINAL	ACTUAL		NOMINAL	ACTUAL				
CL-5-SS	1/4	.2500	#10-24	1/4	.2500	3/16	3/8	3/8	1/8
CL-12-SS				3/8	.3750				
CL-13-SS				1/2	.500				
CL-37-SS				5/8	.6250				
CL-15-SS				3/4	.750				
CL-16-SS				1	1.0000				
CL-1-SS	5/16	.3125	1/4-20	1/4	.2500	7/32	7/16	7/16	5/32
CL-6-SS				5/16	.3125				
CL-11-SS				3/8	.3750				
CL-20-SS				1/2	.5000				
CL-21-SS				5/8	.6250				
CL-7-SS				3/4	.7500				
CL-8-SS	1	1.0000							
CL-24-SS	3/8	.3750	5-16-18	1/4	.2500	1/4	1/2	9/16	3/16
CL-2-SS				3/8	.3750				
CL-14-SS				1/2	.5000				
CL-9-SS				5/8	.6250				
CL-10-SS				3/4	.7500				
CL-47-SS				1	1.0000				
CL-3-SS	1/2	.5000	3/8-16	3/8	.3750	5/16	5/8	3/4	1/4
CL-4-SS				1/2	.5000				
CL-31-SS				5/8	.6250				
CL-32-SS				3/4	.7500				
CL-46-SS				1	1.0000				
CL-33-SS				1/2	.5000				
CL-34-SS	5/8	.6250	1/2-13	5/8	.6250	3/8	3/4	7/8	5/16
CL-35-SS				3/4	.7500				
CL-36-SS				1	1.0000				
CL-38-SS				1/2	.5000				
CL-39-SS				3/4	.7500				
CL-40-SS				1	1.0000				
CL-3-SS	3/4	7.500	5/8-11	3/8	.7500	1/2	7/8	1	3/8
CL-4-SS				3/4	.7500				
CL-31-SS				5/8	.6250				
CL-32-SS				3/4	.7500				
CL-46-SS				1	1.0000				
CL-33-SS				1/2	.5000				

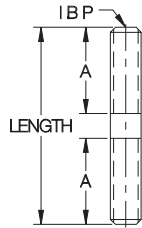
METRIC

CLM-806-SS	8mm	.3150	M6	6mm	.2362	.22	.44	.51	4mm
CLM-808-SS				8mm	.3150				
CLM-810-SS				10mm	.3937				
CLM-812-SS				12mm	.4724				
CLM-816-SS				16mm	.6299				
CLM-820-SS				20mm	.7874				
CLM-1006-SS	10mm	.3937	M8	6mm	.2362	.28	.52	.63	5mm
CLM-1008-SS				8mm	.3150				
CLM-1010-SS				10mm	.3937				
CLM-1012-SS				12mm	.4724				
CLM-1016-SS				16mm	.6299				
CLM-1020-SS				20mm	.7874				
CLM-1310-SS	13mm	.5118	M10	10mm	.3937	.35	.65	.71	6mm
CLM-1312-SS				12mm	.4724				
CLM-1316-SS				16mm	.6299				
CLM-1320-SS				20mm	.7874				
CLM-1610-SS	16mm	.6299	M12	10mm	.3937	.43	.72	.94	8mm
CLM-1612-SS				12mm	.4724				
CLM-1616-SS				16mm	.6299				
CLM-1620-SS				20mm	.7874				
CLM-2016-SS	20mm	.7874	M16	16mm	.6299	.55	.88	1.18	10mm
CLM-2020-SS				20mm	.7874				
CLM-2025-SS				25mm	.9843				



CLAMPING STUDS

STEEL: 1144 STEEL, 100,000 PSI MIN. YIELD, 115,000 PSI MIN. TENSILE, BLACK OXIDE FINISH
STAINLESS STEEL: 300 SERIES



High-strength general-purpose Clamping Stud, for use with a T Nut, or for installation directly into a fixture plate. Available in thread sizes from 1/4-20 to 1"-8 (M6 to M20 in metric), each in a choice of several lengths. Now also available in stainless steel, in 3/8-16, 1/2-13, and 5/8-11 thread sizes (for smaller stainless sizes, see Fixture Studs, page 258).

STEEL (USA)

PART NO.	THREAD SIZE	LENGTH	A	
CL-1/4-20X1.50-STUD	1/4-20	1.50	5/8	
CL-1/4-20X2.00-STUD		2.00	7/8	
CL-1/4-20X2.50-STUD		2.50	1	
CL-1/4-20X3.00-STUD		3.00		
CL-1/4-20X3.50-STUD		3.50		
CL-1/4-20X4.00-STUD		4.00		
CL-5/16-18X1.50-STUD	5/16-18	1.50	9/16	
CL-5/16-18X2.00-STUD		2.00	13/16	
CL-5/16-18X2.50-STUD		2.50	1-1/16	
CL-5/16-18X3.00-STUD		3.00	1-1/8	
CL-5/16-18X3.50-STUD		3.50		
CL-5/16-18X4.00-STUD		4.00		
CL-5/16-18X5.00-STUD	5.00			
CL-5/16-18X6.00-STUD	6.00	3/8-16	1-1/4	
CL-3/8-16X1.50-STUD	1.50			9/16
CL-3/8-16X2.00-STUD	2.00			13/16
CL-3/8-16X2.50-STUD	2.50			1-1/16
CL-3/8-16X3.00-STUD	3.00			2
CL-3/8-16X3.50-STUD	3.50			
CL-3/8-16X4.00-STUD	4.00			
CL-3/8-16X4.50-STUD	4.50			
CL-3/8-16X5.00-STUD	5.00			
CL-3/8-16X5.50-STUD	5.50			
CL-3/8-16X6.00-STUD	6.00			
CL-3/8-16X6.50-STUD	6.50			
CL-3/8-16X7.00-STUD	7.00			
CL-3/8-16X7.50-STUD	7.50			
CL-3/8-16X8.00-STUD	8.00			
CL-1/2-13X2.00-STUD	1/2-13	2.00	3/4	
CL-1/2-13X2.50-STUD		2.50	1	
CL-1/2-13X3.00-STUD		3.00	1-1/4	
CL-1/2-13X3.50-STUD		3.50	1-1/2	
CL-1/2-13X4.00-STUD		4.00		
CL-1/2-13X4.50-STUD		4.50		
CL-1/2-13X5.00-STUD		5.00		
CL-1/2-13X5.50-STUD		5.50		
CL-1/2-13X6.00-STUD		6.00		
CL-1/2-13X6.50-STUD		6.50		
CL-1/2-13X7.00-STUD		7.00		
CL-1/2-13X7.50-STUD		7.50		
CL-1/2-13X8.00-STUD	8.00			
CL-1/2-13X9.00-STUD	9.00			
CL-1/2-13X10.00-STUD	10.00	2		
CL-1/2-13X12.00-STUD	12.00			

STEEL (USA) (Cont.)

PART NO.	THREAD SIZE	LENGTH	A		
CL-5/8-11X2.50-STUD	5/8-11	2.50	15/16		
CL-5/8-11X3.00-STUD		3.00	1-3/16		
CL-5/8-11X3.50-STUD		3.50	1-7/16		
CL-5/8-11X4.00-STUD		4.00	1-11/16		
CL-5/8-11X4.50-STUD		4.50	1-3/4		
CL-5/8-11X5.00-STUD		5.00			
CL-5/8-11X5.50-STUD		5.50			
CL-5/8-11X6.00-STUD		6.00			
CL-5/8-11X6.50-STUD		6.50			
CL-5/8-11X7.00-STUD		7.00			
CL-5/8-11X7.50-STUD		7.50	2		
CL-5/8-11X8.00-STUD		8.00			
CL-5/8-11X9.00-STUD	9.00				
CL-5/8-11X10.00-STUD	10.00				
CL-5/8-11X12.00-STUD	12.00				
CL-5/8-11X14.00-STUD	14.00				
CL-3/4-10X3.00-STUD	3/4-10	3.00		1-1/8	
CL-3/4-10X3.50-STUD		3.50		1-3/8	
CL-3/4-10X4.00-STUD		4.00		1-5/8	
CL-3/4-10X5.00-STUD		5.00		2	
CL-3/4-10X6.00-STUD		6.00			
CL-3/4-10X7.00-STUD		7.00			
CL-3/4-10X8.00-STUD		8.00			
CL-3/4-10X9.00-STUD		9.00			
CL-3/4-10X10.00-STUD		10.00			
CL-3/4-10X12.00-STUD		12.00			
CL-3/4-10X14.00-STUD		14.00			
CL-3/4-10X16.00-STUD		16.00			
CL-7/8-9X4.00-STUD	7/8-9	4.00	1-9/16		
CL-7/8-9X5.00-STUD		5.00	2-1/16		
CL-7/8-9X6.00-STUD		6.00	2-1/4		
CL-7/8-9X6.50-STUD		6.50			
CL-7/8-9X7.00-STUD		7.00			
CL-7/8-9X8.00-STUD		8.00			
CL-7/8-9X10.00-STUD		10.00			
CL-7/8-9X12.00-STUD		12.00			
CL-1-8X4.00-STUD		1"-8		4.00	1-1/2
CL-1-8X5.00-STUD				5.00	2
CL-1-8X6.00-STUD				6.00	2-1/2
CL-1-8X8.00-STUD				8.00	
CL-1-8X10.00-STUD	10.00				
CL-1-8X12.00-STUD	12.00				

STAINLESS STEEL (USA)

PART NO.	THREAD SIZE	LENGTH	A
CL-3/8-16X2.00-STUD-S	3/8-16	2.00	13/16
CL-3/8-16X2.50-STUD-S		2.50	1-1/16
CL-3/8-16X3.00-STUD-S		3.00	1-1/4
CL-3/8-16X3.50-STUD-S		3.50	
CL-3/8-16X4.00-STUD-S		4.00	
CL-3/8-16X4.50-STUD-S		4.50	
CL-3/8-16X5.00-STUD-S	5.00	2	
CL-3/8-16X6.00-STUD-S	6.00		

STAINLESS STEEL (USA) (Cont.)

PART NO.	THREAD SIZE	LENGTH	A	
CL-1/2-13X2.00-STUD-S	1/2-13	2.00	3/4	
CL-1/2-13X2.50-STUD-S		2.50	1	
CL-1/2-13X3.00-STUD-S		3.00	1-1/4	
CL-1/2-13X3.50-STUD-S		3.50	1-1/2	
CL-1/2-13X4.00-STUD-S		4.00		
CL-1/2-13X4.50-STUD-S		4.50		
CL-1/2-13X5.00-STUD-S		5.00		
CL-1/2-13X5.50-STUD-S		5.50		
CL-1/2-13X6.00-STUD-S		6.00		
CL-5/8-11X2.50-STUD-S		5/8-11	2.50	15/16
CL-5/8-11X3.00-STUD-S			3.00	1-3/16
CL-5/8-11X3.50-STUD-S			3.50	1-7/16
CL-5/8-11X4.00-STUD-S	4.00		1-11/16	
CL-5/8-11X4.50-STUD-S	4.50		1-3/4	
CL-5/8-11X5.00-STUD-S	5.00			
CL-5/8-11X5.50-STUD-S	5.50	2		
CL-5/8-11X6.00-STUD-S	6.00			

STEEL (METRIC)

PART NO.	THREAD SIZE	LENGTH	A	
CLM-6X-35-STUD	M6	1.38 (35mm)	.59	
CLM-6X-50-STUD		1.97 (50mm)	.87	
CLM-6X-65-STUD		2.56 (65mm)	1.06	
CLM-6X-80-STUD		3.15 (80mm)		
CLM-6X-95-STUD		3.75 (95mm)		
CLM-6X-110-STUD		4.33 (110mm)		
CLM-8X-50-STUD	M8	1.97 (50mm)		.83
CLM-8X-65-STUD		2.56 (65mm)		1.14
CLM-8X-80-STUD		3.15 (80mm)	1.22	
CLM-8X-95-STUD		3.74 (95mm)		
CLM-8X-110-STUD		4.33 (110mm)		
CLM-10X-50-STUD		M10		1.97 (50mm)
CLM-10X-65-STUD	2.56 (65mm)			1.08
CLM-10X-80-STUD	3.15 (80mm)			1.38
CLM-10X-95-STUD	3.74 (95mm)			
CLM-10X-110-STUD	4.33 (110mm)			
CLM-10X-125-STUD	4.92 (125mm)			
CLM-10X-150-STUD	5.91 (150mm)	1.54		
CLM-10X-175-STUD	6.89 (175mm)			
CLM-10X-200-STUD	7.87 (200mm)			
CLM-12X-65-STUD	M12		2.56 (65mm)	1.04
CLM-12X-80-STUD			3.15 (80mm)	1.34
CLM-12X-95-STUD			3.74 (95mm)	1.54
CLM-12X-110-STUD		4.33 (110mm)		
CLM-12X-125-STUD		4.92 (125mm)		
CLM-12X-150-STUD		5.91 (150mm)		
CLM-12X-175-STUD	6.89 (175mm)	1.85		
CLM-12X-200-STUD	7.87 (200mm)			
CLM-16X-80-STUD	M16		3.15 (80mm)	1.26
CLM-16X-95-STUD			3.74 (95mm)	1.56
CLM-16X-110-STUD			4.33 (110mm)	1.85
CLM-16X-125-STUD			4.92 (125mm)	
CLM-16X-150-STUD		5.91 (150mm)		
CLM-16X-175-STUD		6.89 (175mm)		
CLM-16X-200-STUD	7.87 (200mm)			
CLM-16X-250-STUD	9.84 (250mm)	2.07		
CLM-20X-80-STUD	M20		3.15 (80mm)	1.18
CLM-20X-95-STUD			3.74 (95mm)	1.48
CLM-20X-110-STUD			4.33 (110mm)	1.77
CLM-20X-125-STUD			4.92 (125mm)	2.07
CLM-20X-150-STUD			5.91 (150mm)	2.17
CLM-20X-175-STUD		6.89 (175mm)		
CLM-20X-200-STUD	7.87 (200mm)			

FIXTURE STUDS

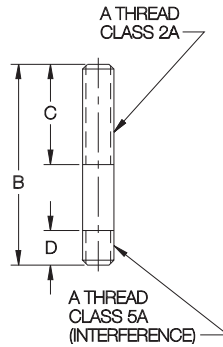
300-SERIES STAINLESS STEEL, PASSIVATED

USA



Stainless Steel

Fixture Studs have a thread-locking interference thread at the bottom end to install permanently in a fixture plate. These small sizes are designed specifically for mini-size stainless clamp straps. Available in thread sizes from #10-24 to 3/8-16, each in a choice of several lengths.



PART NO.	A	B	C	D
CL-11310	#10-24	1	1/2	7/32
CL-11315		1-1/2	3/4	
CL-11320		2	3/4	
CL-11410	#10-32	1	1/2	7/32
CL-11415		1-1/2	3/4	
CL-11420		2	3/4	
CL-11515	1/4-20	1-1/2	5/8	9/32
CL-11520		2	3/4	
CL-11525		2-1/2	3/4	
CL-11530	5/16-18	3	1	11/32
CL-11615		1-1/2	5/8	
CL-11620		2	1	
CL-11625	3/8-16	2-1/2	1-1/4	11/32
CL-11715		1-1/2	3/4	
CL-11725		2-1/2	1-1/4	
CL-11730	3/8-16	3	1-3/8	11/32
CL-11740		4	1-1/2	

FULLY THREADED STUDS

316 STAINLESS STEEL, PASSIVATED

USA

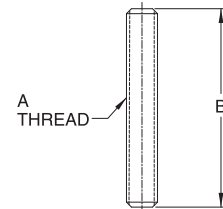


NEW!

Stainless Steel

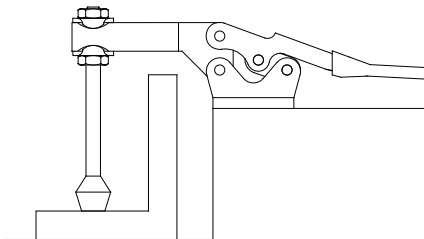
Fully Threaded Studs are ideal for making custom assemblies using thread-locking adhesive – including stud-type versions of any hand knob, and cushion spindles for Toggle Clamps. These studs are made of 316 stainless steel for excellent corrosion resistance. A thread-locking adhesive such as Loctite® 263 is suitable for most applications. Available in thread sizes from #10-32 to 5/8-11 (M5 to M10 in metric), each in a choice of many lengths.

PART NO.	A THREAD SIZE	B OVERALL LENGTH
CL-10-32X1.00-FTS-S	#10-32	1.00
CL-10-32X1.25-FTS-S		1.25
CL-10-32X1.50-FTS-S		1.50
CL-10-32X1.75-FTS-S		1.75
CL-10-32X2.00-FTS-S		2.00
CL-10-32X2.50-FTS-S		2.50
CL-1/4-20X1.50-FTS-S	1/4-20	1.50
CL-1/4-20X1.75-FTS-S		1.75
CL-1/4-20X2.00-FTS-S		2.00
CL-1/4-20X2.50-FTS-S		2.50
CL-1/4-20X3.00-FTS-S		3.00
CL-1/4-20X3.50-FTS-S		3.50
CL-1/4-20X4.00-FTS-S	5/16-18	4.00
CL-5/16-18X1.75-FTS-S		1.75
CL-5/16-18X2.00-FTS-S		2.00
CL-5/16-18X2.50-FTS-S		2.50
CL-5/16-18X3.00-FTS-S		3.00
CL-5/16-18X3.50-FTS-S		3.50
CL-5/16-18X4.00-FTS-S	3/8-16	4.00
CL-3/8-16X2.00-FTS-S		2.00
CL-3/8-16X2.50-FTS-S		2.50
CL-3/8-16X3.00-FTS-S		3.00
CL-3/8-16X3.50-FTS-S		3.50
CL-3/8-16X4.00-FTS-S		4.00
CL-3/8-16X5.00-FTS-S	1/2-13	5.00
CL-1/2-13X2.50-FTS-S		2.50
CL-1/2-13X3.00-FTS-S		3.00
CL-1/2-13X3.50-FTS-S		3.50
CL-1/2-13X4.00-FTS-S		4.00
CL-1/2-13X5.00-FTS-S		5.00
CL-1/2-13X6.00-FTS-S	5/8-11	6.00
CL-5/8-11X3.00-FTS-S		3.00
CL-5/8-11X4.00-FTS-S		4.00
CL-5/8-11X5.00-FTS-S		5.00
CL-5/8-11X6.00-FTS-S		6.00



METRIC

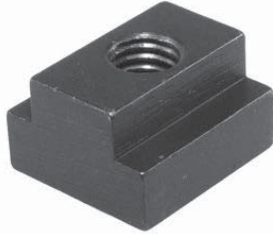
PART NO.	A THREAD SIZE	B OVERALL LENGTH
CLM-5X2.5-FTS-S	M5	.98 (25mm)
CLM-5X30-FTS-S		1.18 (30mm)
CLM-5X40-FTS-S		1.57 (40mm)
CLM-5X50-FTS-S	M6	1.97 (50mm)
CLM-6X30-FTS-S		1.18 (30mm)
CLM-6X40-FTS-S		1.58 (40mm)
CLM-6X50-FTS-S	M6	1.97 (50mm)
CLM-6X60-FTS-S		2.36 (60mm)
CLM-6X70-FTS-S		2.76 (70mm)
CLM-6X80-FTS-S	M8	3.15 (80mm)
CLM-6X100-FTS-S		3.94 (100mm)
CLM-8X40-FTS-S		1.57 (40mm)
CLM-8X50-FTS-S	M8	1.97 (50mm)
CLM-8X60-FTS-S		2.36 (60mm)
CLM-8X70-FTS-S		2.76 (70mm)
CLM-8X80-FTS-S	M10	3.15 (80mm)
CLM-8X100-FTS-S		3.94 (100mm)
CLM-10X50-FTS-S		1.97 (50mm)
CLM-10X60-FTS-S	M10	2.36 (60mm)
CLM-10X70-FTS-S		2.76 (70mm)
CLM-10X80-FTS-S		3.15 (80mm)
CLM-10X100-FTS-S	3.94 (100mm)	



Fully Threaded Studs can be used with Polyurethane Flat Cushions to make custom Toggle Clamp spindles.

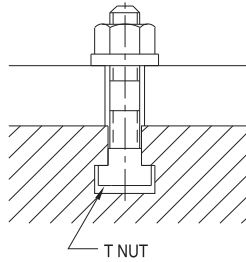
T NUTS

STEEL: MILD STEEL, CARBURIZED-HARDENED, BLACK OXIDE FINISH
STAINLESS: 300-SERIES STAINLESS STEEL, PASSIVATED



**SMALLER
SIZES NOW
AVAILABLE!**

Sizes for all standard machine tables. Safety-stop feature prevents breaking the machine-table slot. Threads stop one short of going through T Nut to prevent a stud from jacking the nut out of the table.



STEEL (USA)

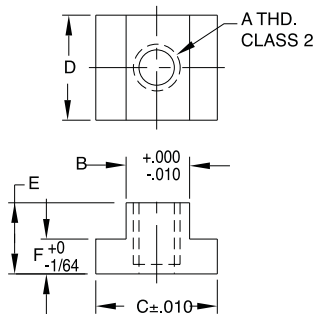
PART NO.	TABLE SLOT SIZE	A	B	C	D	E	F
CL-26-TN	5/16 or 8mm	1/4-20	.307	9/16	9/16	1/4	3/16
CL-18-TN	3/8 or 10mm	1/4-20	.370	5/8	7/8	7/16	7/32
CL-19-TN		5/16-18					
CL-20-TN	7/16	5/16-18	.432	11/16	7/8	1/2	
CL-00-TN	12mm	3/8-16	.467	3/4	3/4	1/2	
CL-21-TN	1/2	5/16-18	.495	7/8	7/8	1/2	9/32
CL-0-TN		3/8-16					
CL-1-TN	9/16 or 14mm	3/8-16	.550	7/8	7/8	1/2	5/16
CL-9-TN		1/2-13					
CL-16-TN	5/8 or 16mm	3/8-16	.620	1	1-1/8	5/8	11/32
CL-2-TN		1/2-13					
CL-3-TN	11/16 or 18mm	1/2-13	.682	1-1/8	1-1/4	3/4	7/16
CL-10-TN		5/8-11					
CL-10A-TN			.675		1-1/2	1-1/8	15/32
CL-17-TN	3/4	1/2-13	.745	1-1/4	1-1/4	3/4	15/32
CL-4-TN		5/8-11					
CL-14-TN	20mm	5/8-11	.782			7/8	
CL-5-TN	13/16	5/8-11	.807	1-1/4	1-1/2	1	9/16
CL-11-TN		3/4-10					
CL-15-TN	22mm	3/4-10	.861	1-1/4	1-1/2	1	1/2
CL-6-TN	7/8	3/4-10	.870	1-1/2	1-1/2	1	9/16
CL-7-TN	1	3/4-10	.995	1-5/8	1-3/4	1	5/8
CL-22-TN		7/8-9					
CL-8-TN	1-1/16	3/4-10	1.057	1-5/8	2	1-1/8	11/16
CL-23-TN		7/8-9					
CL-24-TN	1-1/8	7/8-9	1.120	1-3/4	2	1-1/2	3/4
CL-25-TN		1"-8					

STAINLESS STEEL (USA)

PART NO.	TABLE SLOT SIZE	A	B	C	D	E	F
CL-00-STN	7/16	3/8-16	.432	11/16	7/8	1/2	7/32
CL-0-STN	1/2		.495	7/8	7/8	1/2	9/32
CL-1-STN	9/16 or 14mm	3/8-16	.550	7/8	7/8	1/2	5/16
CL-9-STN		1/2-13					
CL-2-STN	5/8 or 16mm	1/2-13	.620	1	1-1/8	5/8	11/32
CL-3-STN	11/16 or 18mm	1/2-13	.682	1-1/8	1-1/4	3/4	7/16
CL-10-STN		5/8-11					

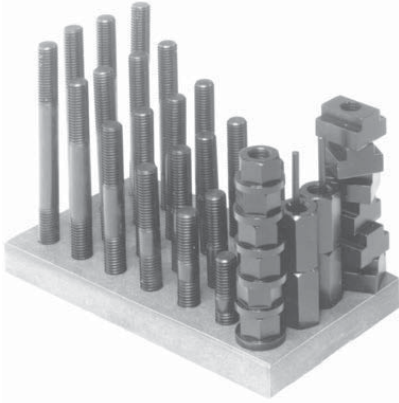
STEEL (METRIC)

PART NO.	TABLE SLOT SIZE	A	B	C	D	E	F	
CLM-26-TN	5/16 or 8mm	M6	.307	9/16	9/16	1/4	3/16	
CLM-18-TN	3/8 or 10mm	M6	.370	5/8	7/8	7/16	7/32	
CLM-19-TN		M8						
CLM-00-TN	12mm	M10	.467	3/4	3/4	1/2		17/64
CLM-0-TN	1/2		.495	7/8	7/8	1/2		9/32
CLM-1-TN	9/16 or 14mm	M10	.546	7/8	7/8	5/8	5/16	
CLM-9-TN		M12						
CLM-2-TN	5/8 or 16mm	M12	.620	1	1-1/8	5/8	11/32	
CLM-3-TN	11/16 or 18mm	M12	.682	1-1/8	1-1/4	3/4	7/16	
CLM-10-TN		M16						
CLM-4-TN	20mm	M16	.782	1-1/4	1-1/4	7/8	15/32	
CLM-5-TN	13/16		.807	1-1/4	1-1/2	1	9/16	
CLM-6-TN	22mm	M20	.861	1-1/4	1-1/2	1	1/2	



T NUT & STUD SETS

SEE PAGES 226, 231, AND 233 FOR MATERIAL SPECIFICATIONS



38-piece set includes a complete range of stud lengths with matching T Nuts, flange nuts, and coupling nuts — all mounted in a handy wooden holder.

Set includes:

- (4) Studs of each length 3", 4", 5", 6", 7", 8", or 80, 95, 125, 150, 175, 200mm
- (6) T Nuts
- (6) Flange Nuts
- (4) Coupling Nuts
- (1) Handy Holder



USA

PART NO.	TABLE SLOT SIZE	STUDS (24)	T NUTS (6)	FLANGE NUTS (6)	COUPLING NUTS (4)	HOLDER (1)
CL-1-TNS	7/16	3/8-16	CL-00-TN	CL-2-FN	CL-1-CN	CL-1-TNH
CL-14-TNS	12mm		CL-12-TN			
CL-2-TNS	1/2	3/8-16	CL-0-TN	CL-2-FN	CL-1-CN	CL-1-TNH
CL-3-TNS	9/16 or 14mm		CL-1-TN			
CL-4-TNS	5/8 or 16mm	1/2-13	CL-9-TN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-17-TNS		3/8-16	CL-16-TN	CL-2-FN	CL-1-CN	CL-1-TNH
CL-5-TNS	11/16 or 18mm	1/2-13	CL-2-TN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-6-TNS		1/2-13	CL-3-TN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-7-TNS	3/4	5/8-11	CL-10-TN	CL-4-FN	CL-3-CN	CL-3-TNH
CL-18-TNS		1/2-13	CL-17-TN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-8-TNS	20mm	5/8-11	CL-4-TN	CL-4-FN	CL-3-CN	CL-3-TNH
CL-15-TNS			CL-14-TN			
CL-9-TNS	13/16	5/8-11	CL-5-TN	CL-4-FN	CL-3-CN	CL-3-TNH
CL-10-TNS		3/4-10	CL-11-TN	CL-5-FN	CL-4-CN	CL-4-TNH
CL-16-TNS	22mm	3/4-10	CL-15-TN	CL-5-FN	CL-4-CN	CL-4-TNH
CL-11-TNS			7/8			
CL-12-TNS	1	1-1/16	CL-7-TN	CL-5-FN	CL-4-CN	CL-4-TNH
CL-13-TNS	1-1/16		CL-8-TN			

METRIC

PART NO.	TABLE SLOT SIZE	STUDS (24)	T NUTS (6)	FLANGE NUTS (6)	COUPLING NUTS (4)	HOLDER (1)
CLM-1-TNS	12mm	M10	CLM-00-TN	CLM-10-FN	CLM-10-CN	CL-1-TNH
CLM-2-TNS	1/2		CLM-0-TN			
CLM-3-TNS	9/16 or 14mm	M10	CLM-1-TN	CLM-10-FN	CLM-10-CN	CL-1-TNH
CLM-4-TNS	5/8 or 16mm	M12	CLM-9-TN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-5-TNS		M12	CLM-2-TN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-6-TNS	11/16 or 18mm	M12	CLM-3-TN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-7-TNS		M16	CLM-10-TN	CLM-16-FN	CLM-16-CN	CL-3-TNH
CLM-8-TNS	20mm	M16	CLM-4-TN	CLM-16-FN	CLM-16-CN	CL-3-TNH
CLM-9-TNS			13/16			
CLM-11-TNS	22mm	M20	CLM-6-TN	CLM-20-FN	CLM-20-CN	CL-4-TNH

T SLOT CLEANERS

MILD STEEL, CARBURIZED-HARDENED, BLACK OXIDE FINISH

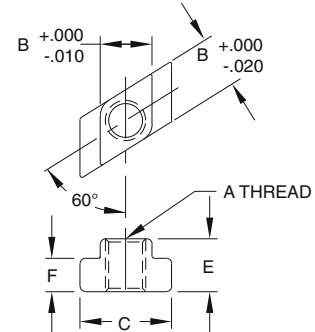
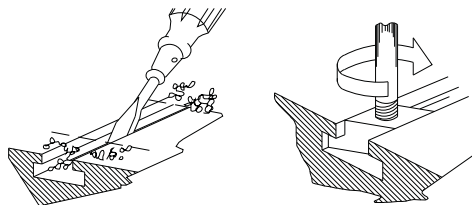
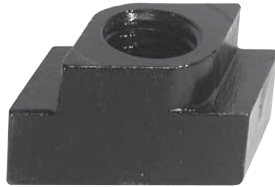


This handy tool is ideal for cleaning chips and debris out of machine-table T Slots. Much safer than blowing chips out with air. Made of heat treated steel, a full .109" thick. Use for any T Slot 3/8" (10mm) and above. One end is sized for smaller T Slots, while the other end is sized for larger T Slots.

PART NO.	OVERALL LENGTH	THICKNESS
CL-1-TSCL	6	.109

ROTARY T NUTS

ALLOY STEEL, RC 40-45, BLACK OXIDE FINISH



USA

PART NO.	TABLE SLOT SIZE	A	B	C	E	F
CL-0-RTN	1/2	3/8-16	.495	7/8	1/2	9/32
CL-9-RTN	9/16	1/2-13	.560	7/8	5/8	11/32
CL-2-RTN	5/8 or 16mm	1/2-13	.620	1	5/8	11/32
CL-3-RTN	11/16 or 18mm	1/2-13	.682	1-1/8	3/4	7/16
CL-10-RTN	3/4 or 20mm	5/8-11	.745	1-1/4	3/4	15/32
CL-7-RTN	1	3/4-10	.995	1-5/8	1	5/8

METRIC

PART NO.	TABLE SLOT SIZE	A	B	C	E	F
CLM-0-RTN	1/2	M10	.495	7/8	1/2	9/32
CLM-9-RTN	9/16 or 14mm	M12	.560	7/8	5/8	11/32
CLM-2-RTN	5/8 or 16mm	M12	.620	1	5/8	11/32
CLM-3-RTN	11/16 or 18mm	M12	.682	1-1/8	3/4	7/16
CLM-10-RTN	3/4 or 20mm	M16	.745	1-1/4	3/4	15/32
CLM-4-RTN	1	M16	.995	1-5/8	1	5/8

Rotary T Nuts can be inserted into the top of a T slot, unlike normal T Nuts, which must be inserted at the end of the slot. This allows adding T Nuts and Studs anywhere for a new setup, without tearing down any existing setups. Make sure that the area where the Rotary T Nut will be inserted is clear of debris, to allow the T Nut to rotate a full 60 degrees. Same safety-stop thread feature as standard T Nuts.

ROTARY T NUT AND STUD SETS

SEE PAGES 204, 215 AND 219 FOR MATERIAL SPECIFICATIONS



38-piece set includes a complete range of stud lengths with matching T Nuts, Flange Nuts, and Coupling Nuts — all mounted in a handy wooden holder. Set includes:

- (4) Studs of each length 3", 4", 5", 6", 7" and 8" (80, 95, 125, 150, 175, and 200mm in metric)
- (6) Rotary T Nuts
- (6) Flange Nuts
- (4) Coupling Nuts

USA

PART NO.	TABLE SLOT SIZE	STUDS (24)	ROTARY T NUTS (6)	FLANGE NUTS (6)	COUPLING NUTS (4)	HOLDER (1)
CL-2-RTNS	1/2	3/8-16	CL-0-RTN	CL-2-FN	CL-1-CN	CL-1-TNH
CL-4-RTNS	9/16 or 14mm	1/2-13	CL-9-RTN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-5-RTNS	5/8 or 16mm	1/2-13	CL-2-RTN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-6-RTNS	11/16 or 18mm	1/2-13	CL-3-RTN	CL-3-FN	CL-2-CN	CL-2-TNH
CL-7-RTNS		5/8-11	CL-10-RTN	CL-4-FN	CL-3-CN	CL-3-TNH
CL-8-RTNS	3/4 or 20mm	5/8-11	CL-4-RTN	CL-4-FN	CL-3-CN	CL-3-TNH
CL-12-RTNS	1	3/4-10	CL-7-RTN	CL-5-FN	CL-4-CN	CL-4-TNH

METRIC

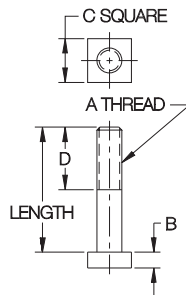
PART NO.	TABLE SLOT SIZE	STUDS (24)	ROTARY T NUTS (6)	FLANGE NUTS (6)	COUPLING NUTS (4)	HOLDER (1)
CLM-2-RTNS	1/2	M10	CLM-0-RTN	CLM-10-FN	CLM-10-CN	CL-1-TNH
CLM-4-RTNS	9/16 or 14mm	M12	CLM-9-RTN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-5-RTNS	5/8 or 16mm	M12	CLM-2-RTN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-6-RTNS	11/16 or 18mm	M12	CLM-3-RTN	CLM-12-FN	CLM-12-CN	CL-2-TNH
CLM-7-RTNS		M16	CLM-10-RTN	CLM-16-FN	CLM-16-CN	CL-3-TNH
CLM-8-RTNS	3/4 or 20mm	M16	CLM-4-RTN	CLM-16-FN	CLM-16-CN	CL-3-TNH

T BOLTS

STEEL: 4140/5140, HEAT TREATED, 125,000 PSI MIN. TENSILE STRENGTH, BLACK OXIDE FINISH
STAINLESS STEEL: 302 STAINLESS



High-strength alloy steel clamping bolts for use in T slots. Available in larger thread sizes from 1/2-13 to 1"-8 (M10 to M20 in metric), each in a choice of several lengths, in steel or stainless steel.



USA

PART NO.		A	B	C	D	LENGTH			
STEEL	STAINLESS								
CL-0-TB-1.50	CL-0-TB-1.50-S	3/8-16	1/4	11/16	1-1/4	1.50			
CL-0-TB-2.00	CL-0-TB-2.00-S				1-3/4	2.00			
CL-0-TB-2.50	CL-0-TB-2.50-S				2	2.50			
CL-0-TB-3.00	CL-0-TB-3.00-S					3.00			
CL-0-TB-3.50	—					3.50			
CL-0-TB-4.00	—					4.00			
CL-0-TB-5.00	—					5.00			
CL-0-TB-6.00	—					6.00			
CL-1-TB-1.50	CL-1-TB-1.50-S				1/2-13	5/16	7/8	1-1/4	1.50
CL-1-TB-2.00	CL-1-TB-2.00-S							1-3/4	2.00
CL-1-TB-2.50	CL-1-TB-2.50-S	2	2.50						
CL-1-TB-3.00	CL-1-TB-3.00-S		3.00						
CL-1-TB-3.50	CL-1-TB-3.50-S		3.50						
CL-1-TB-4.00	CL-1-TB-4.00-S		4.00						
CL-1-TB-5.00	CL-1-TB-5.00-S		5.00						
CL-1-TB-6.00	CL-1-TB-6.00-S		6.00						
CL-1-TB-8.00	CL-1-TB-8.00-S	8.00							
CL-2-TB-1.50	—	5/8-11	13/32	1-1/8				1-1/4	1.50
CL-2-TB-2.00	—				1-3/4	2.00			
CL-2-TB-2.50	—				2	2.50			
CL-2-TB-3.00	—					3.00			
CL-2-TB-3.50	—					3.50			
CL-2-TB-4.00	CL-2-TB-4.00-S					4.00			
CL-2-TB-5.00	CL-2-TB-5.00-S					5.00			
CL-2-TB-6.00	CL-2-TB-6.00-S					6.00			
CL-2-TB-8.00	CL-2-TB-8.00-S				8.00				
CL-3-TB-2.00	—				3/4-10	17/32	1-5/16	1-3/4	2.00
CL-3-TB-3.00	—	2	3.00						
CL-3-TB-4.00	—		4.00						
CL-3-TB-5.00	CL-3-TB-5.00-S		5.00						
CL-3-TB-6.00	CL-3-TB-6.00-S		6.00						
CL-3-TB-7.00	—		7.00						
CL-3-TB-8.00	CL-3-TB-8.00-S		8.00						
CL-5-TB-4.00	—	1"-8	11/16	1-11/16				3	4.00
CL-5-TB-5.00	—							4	5.00
CL-5-TB-6.00	—							6.00	
CL-5-TB-7.00	—				7.00				
CL-5-TB-8.00	—	8.00							

METRIC

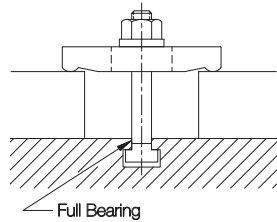
CLM-10-TB-40	—	M10	.25	.69	1.18	1.57 (40mm)
CLM-10-TB-50	—				1.77	1.97 (50mm)
CLM-10-TB-75	—				1.97	2.95 (75mm)
CLM-10-TB-100	—	M12	.31	.87	1.97	3.94 (100mm)
CLM-12-TB-50	—				1.97	1.97 (50mm)
CLM-12-TB-65	—					2.56 (65mm)
CLM-12-TB-75	—					2.95 (75mm)
CLM-12-TB-90	—					3.54 (90mm)
CLM-12-TB-100	—					3.94 (100mm)
CLM-12-TB-125	—	4.92 (125mm)				
CLM-16-TB-50	—	M16	.39	1.10	1.77	1.97 (50mm)
CLM-16-TB-75	—				1.97	2.95 (75mm)
CLM-16-TB-100	—				1.97	3.94 (100mm)
CLM-16-TB-150	—	2.56	5.91 (150mm)			
CLM-20-TB-50	—	M20	.53	1.30	1.77	1.97 (50mm)
CLM-20-TB-75	—				1.97	2.95 (75mm)
CLM-20-TB-100	—				1.97	3.94 (100mm)

T-SLOT BOLTS

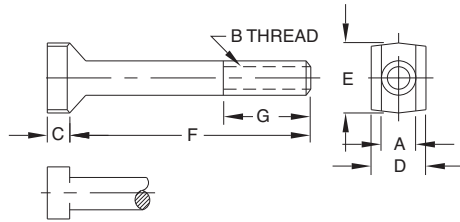
FORGED 1045 STEEL, BLACK OXIDE FINISH



T-Slot Bolt

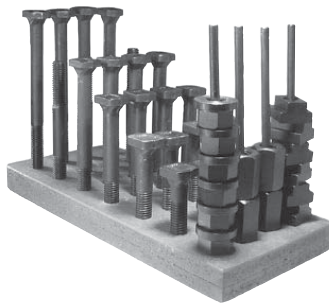


High-strength bolt for T-slotted machine tables. Full bearing surfaces prevent twisting or jamming in table slots. Available in thread sizes from 3/8-16 to 3/4-10, each in a choice of several lengths.



T-SLOT BOLTS (USA)

PART NO.	B THREAD	A	FITS TABLE SLOTS	C	D	E	F LENGTH	G
CL-6-TSB-1.00	3/8-16	3/8	3/8 7/16 1/2 10mm 12mm	3/16	5/8	13/16	1.00	.62
CL-6-TSB-1.50							1.50	1.00
CL-6-TSB-2.00							2.00	1.25
CL-6-TSB-2.50							2.50	
CL-6-TSB-3.00							3.00	1.50
CL-6-TSB-3.50							3.50	
CL-6-TSB-4.00			4.00					
CL-8-TSB-1.50	1/2-13	1/2	1/2 9/16 5/8 14mm 16mm	1/4	13/16	15/16	1.50	1.00
CL-8-TSB-2.00							2.00	1.25
CL-8-TSB-2.50							2.50	
CL-8-TSB-3.00							3.00	1.50
CL-8-TSB-3.50							3.50	
CL-8-TSB-4.00							4.00	
CL-8-TSB-5.00			5.00					
CL-8-TSB-6.00			6.00			2.00		
CL-10-TSB-1.50	5/8-11	5/8	5/8 11/16 3/4 18mm 20mm	5/16	1-1/32	1-3/16	1.50	1.00
CL-10-TSB-2.00							2.00	1.25
CL-10-TSB-2.50							2.50	
CL-10-TSB-3.00							3.00	1.50
CL-10-TSB-3.50							3.50	
CL-10-TSB-4.00							4.00	
CL-10-TSB-5.00			5.00					
CL-10-TSB-6.00			6.00			2.00		
CL-10-TSB-8.00			8.00			3.00		
CL-12-TSB-3.00	3/4-10	3/4	3/4 13/16 20mm 22mm	3/8	1-1/4	1-7/16	3.00	1.50
CL-12-TSB-3.50							3.50	
CL-12-TSB-4.00							4.00	
CL-12-TSB-5.00							5.00	2.00
CL-12-TSB-6.00							6.00	2.00
CL-12-TSB-8.00							8.00	3.00



T-Slot Bolt Kit

34-piece set includes a complete range of T-Slot-Bolt lengths, with matching extension Studs, Flange Nuts, and Coupling Nuts. Set includes:

- (4) T-Slot Bolts in each of five different lengths
- (4) Studs
- (6) Flange Nuts
- (4) Coupling Nuts
- (1) Handy Holder

T-SLOT BOLT KITS (USA)

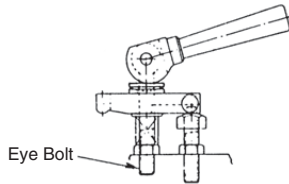
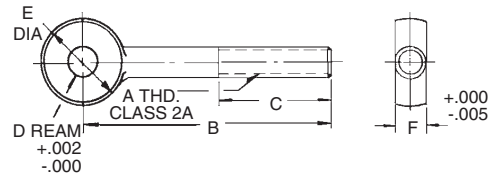
PART NO.	FITS TABLE SIZES	T-SLOT BOLTS (4 EACH)	STUDS (4)	FLANGE NUTS (6)	COUPLING NUTS (4)	HOLDER (1)
CL-6-TSBK	3/8, 7/16, 1/2 10mm, 12mm	CL-6-TSB-1.50 CL-6-TSB-2.00 CL-6-TSB-2.50 CL-6-TSB-3.00 CL-6-TSB-4.00	CL-3/8-16X4.00-STUD	CL-2-FN	CL-1-CN	CL-1-TNH
CL-8-TSBK	1/2, 9/16, 5/8 14mm, 16mm	CL-8-TSB-2.00 CL-8-TSB-3.00 CL-8-TSB-4.00 CL-8-TSB-5.00 CL-8-TSB-6.00	CL-1/2-13X5.00-STUD	CL-3-FN	CL-2-CN	CL-2-TNH
CL-10-TSBK	5/8, 11/16, 3/4 16mm, 18mm	CL-10-TSB-3.00 CL-10-TSB-4.00 CL-10-TSB-5.00 CL-10-TSB-6.00 CL-10-TSB-8.00	CL-5/8-11X6.00-STUD	CL-4-FN	CL-3-CN	CL-3-TNH
CL-12-TSBK	3/4, 13/16 20mm, 22mm	CL-12-TSB-3.00 CL-12-TSB-4.00 CL-12-TSB-5.00 CL-12-TSB-6.00 CL-12-TSB-8.00	CL-3/4-10X7.00-STUD	CL-5-FN	CL-4-CN	CL-4-TNH

EYE BOLTS

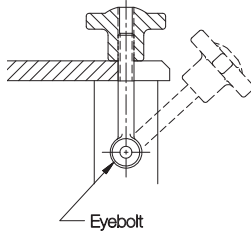
STEEL: 1144, 115,000 PSI MIN. TENSILE STRENGTH, 100,000 PSI MIN. YIELD STRENGTH, BLACK OXIDE FINISH
STAINLESS STEEL: 300 SERIES



High-strength Eye Bolt with a reamed bearing hole. High-carbon steel, fully machined from solid barstock. Also available in stainless steel. Available in other lengths and materials as a special.



Eye Bolt



Eyebolt

USA

PART NO. STEEL	PART NO. STAINLESS STEEL	A	D DIA		B	C	E	F	
			NOMINAL	ACTUAL				NOMINAL	ACTUAL
CL-25-EB	CL-25-EB-S	1/4-20	3/16	.188	2	3/4	1/2	1/4	.250
CL-26-EB	CL-26-EB-S	5/16-18	1/4	.250	3	1-1/4	5/8	5/16	.312
CL-31-EB	CL-31-EB-S				4	2			
CL-32-EB	—	3/8-16	3/8	.375	3	1-1/2	3/4	3/8	.375
CL-38-EB	—				5	2-1/2			
CL-40-EB	CL-40-EB-S	1/2-13	3/8	.375	3-3/4	1-1/2	1	1/2	.500
CL-37-EB	—				5	2			
CL-39-EB	CL-39-EB-S	5/8-11	5/8	.625	4-1/2	2	1-1/4	5/8	.625
CL-50-EB	CL-50-EB-S				6	2-1/2			
CL-51-EB	CL-51-EB-S	3/4-10	5/8	.625	6	2-1/2	1-1/2	3/4	.750
CL-62-EB	CL-62-EB-S				3/4	.750			
CL-63-EB	CL-63-EB-S	—	—	—	—	—	—	—	—
CL-75-EB	—	—	—	—	—	—	—	—	—
CL-76-EB	—	—	—	—	—	—	—	—	—

METRIC

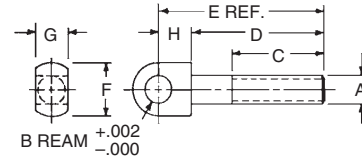
CLM-25A-EB	CLM-25A-EB-S	M6	6mm	.236	1.97	.79	.47	6mm	.236
CLM-26A-EB	—				2.95	1.18			
CLM-31A-EB	CLM-31A-EB-S	M8	8mm	.315	2.95	1.57	.63	8mm	.315
CLM-32A-EB	—				3.94	1.97			
CLM-40-EB	CLM-40-EB-S	M10	10mm	.394	2.95	1.57	.79	10mm	.394
CLM-37-EB	CLM-37-EB-S				3.94	1.97			
CLM-39-EB	—	—	—	—	4.92	2.56	—	—	—
CLM-50A-EB	CLM-50A-EB-S	M12	12mm	.472	3.94	1.57	.94	12mm	.472
CLM-51A-EB	CLM-51A-EB-S				4.92	1.97			
CLM-62-EB	CLM-62-EB-S	M16	16mm	.630	4.53	1.97	1.26	16mm	.630
CLM-63-EB	CLM-63-EB-S				5.91	2.56			
CLM-76A-EB	—	M20	20mm	.787	5.91	2.56	1.57	20mm	.787

SWING BOLTS

STEEL: 1144, 115,000 PSI MIN. TENSILE STRENGTH, 100,000 PSI MIN. YIELD STRENGTH, BLACK OXIDE FINISH



Shoulder-type Eye Bolt that can be used as a stationary hinge point. Reamed hole for smooth bearing.



USA

PART NO.	A	B DIA		C	D	E	F DIA	G		H
		NOMINAL	ACTUAL					NOMINAL	ACTUAL	
CL-00-SB	1/4-20	1/4	.250	3/4	1-3/16	1-1/2	1/2	5/16	.312	5/16
CL-0-SB	5/16-18	5/16	.312	1	1-5/8	2	5/8	3/8	.375	3/8
CL-1-SB	3/8-16	3/8	.375	1-3/8	2	2-1/2	3/4	1/2	.500	1/2
CL-2-SB	1/2-13	1/2	.500	1-3/4	2-1/2	3-1/8	1	5/8	.625	5/8
CL-2A-SB				2-1/4	3-1/2	4-1/8				
CL-3-SB	5/8-11	5/8	.625	1-3/4	2-3/4	3-1/2	1-1/4	3/4	.750	3/4
CL-3A-SB				2-1/2	4	4-3/4				

METRIC

CLM-00-SB	M6	6mm	.236	.79	1.18	1.57	.47	8mm	.315	.39
CLM-0-SB	M8	8mm	.315	.98	1.57	1.96	.63	10mm	.394	
CLM-1-SB	M10	10mm	.394	1.38	1.97	2.56	.79	12mm	.472	.59
CLM-2B-SB	M12	12mm	.472	1.77	2.56	3.15	.94	14mm	.551	.59
CLM-2C-SB				2.17	3.54	4.13				
CLM-3-SB	M16	16mm	.630	1.77	2.76	3.55	1.26	18mm	.709	.79
CLM-3A-SB				2.56	3.94	4.73				

